

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT



(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 3216PTWO/AG/a	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA416)	
International application No. PCT/EP 03/07301	International filing date (day/month/year) 08.07.2003	Priority date (day/month/year) 10.07.2002
International Patent Classification (IPC) or both national classification and IPC B22D11/06		
Applicant DANIELI & C. OFFICINE MECCANICHE S.P.A. et al.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 2 sheets.</p> <p style="text-align: right;">EPO-DC 1 05. 11. 2004 117</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand 09.02.2004	Date of completion of this report 28.09.2004	
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Noske, W Telephone No. +49 89 2399-8448 	

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP 03/07301

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

Description, Pages

1-6 as originally filed

Claims, Numbers

1-3 received on 13.09.2004 with letter of 10.09.2004

Drawings, Sheets

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were **available** or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP 03/07301

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-3
	No: Claims	
Inventive step (IS)	Yes: Claims	1-3
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-3
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP 03/07301

The claimed feature relating to "translating" the mobile deflecting device 5 along a horizontal "rectilinear" trajectory is novel and inventive with respect to nearest prior art D1 WO-A-61 320 as mentioned in the application, paragraph bridging pages 1 and 2, disclosing a pivoting deflecting device.

There is no hint to this feature in any document mentioned in the search report which feature has the advantage of giving a rounded shape to the cast metallic strip earlier, i.e. before the deflecting device 5 is close to its final position and at a stage when the strip is more flexible.

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NEW CLAIMS

1. Continuous metallic strip casting plant, comprising:

- an ingot mould (1), having a pair of counter rotating rolls (2, 2'), adapted to continuously cast a metallic strip (N) along a vertical casting direction;
- 5 - conveying means (6) of said metallic strip, located downstream of said casting direction, adapted to transfer the metallic strip to following processing stations;
- a mobile deflecting device (5), located lower than said counter rotating rolls and able to deflect an initial portion of the metallic strip deviating it towards said conveying means (6) and, in addition, adapted to pass from a standby position,
- 10 of not interference with said metallic strip (N), to an operative position of interference with said metallic strip (N), whereby it deflects the initial portion of the strip from the vertical casting direction, characterised by the fact that there are provided motor means for translating said mobile deflecting device (5) along a substantially horizontal rectilinear trajectory from the standby position to the
- 15 operative position of interference.

2. The plant according to claim 1, wherein said deflector device (5) provides a rounded edge (9) in the foremost part with respect to the casting plane.

20 3. A method for continuous metallic strip casting by means of a plant according to one or more of the preceding claims, comprising the following operations:

- casting of an initial portion of metallic strip of predetermined length in a vertical direction through an ingot mould (1) with counter rotating rolls (2, 2');
- placing said deflecting device in a interference position with the vertical strip
- 25 casting direction.
- when the leading edge of the strip begins to rest upon the surfaces of the deflecting device (5) and to deviate from said substantially vertical path of advancement, making the deflecting device (5) to translate in a horizontal direction such as to deviate the advancing path of the initial strip portion and
- 30 make it assume a substantially horizontal moving direction;
- approaching the strip leading edge, through further translation of said deflecting device (5), towards holding and/or drawing devices to grip the front

edge of the strip and draw it towards predetermined processing stations;

- translating in a horizontal direction said deflecting device (5) in a direction of its removal from the strip.